

نام و نام خانوادگی: فرماندگی پاسنامه تشریحی تکلیف شماره ۱.۸. کلاس: یازدهم A

الف) $\left| \frac{r}{r} \right|, \left| \frac{5}{-r} \right| \rightarrow m = \frac{r - (-r)}{r - 5} = -r \rightarrow y = -rx + 18$

ب) $ry + 4x = 1 \rightarrow y = -rx + \frac{1}{r} \rightarrow m = -r \rightarrow y = -rx + \frac{1}{r}$

2) $ry = -x + 1 \rightsquigarrow y = -\frac{1}{r}x + \frac{1}{r} \rightsquigarrow m = r \rightarrow y = rx - r$

3) $\tan \frac{\pi}{r} = \sqrt{r} \rightarrow m = \sqrt{r} \rightarrow y = \sqrt{r}x - r\sqrt{r} + r$

الف) $\left| \frac{r}{r} \right|, \left| -\frac{1}{r} \right|$
 $d = \sqrt{(x_1 - x_r)^2 + (y_1 - y_r)^2}$

$\rightarrow \sqrt{r^2 + r^2} = 5$

ب) $\left| \frac{r}{r} \right|, \quad rx + ry - r = 0$
 $d = \frac{|ax_0 + by_0 + c|}{\sqrt{a^2 + b^2}}$
 $\rightarrow d = \frac{|4 + 12 - r|}{5} = r$

$rx + 4y = 1 \quad rx + ry = 4 \rightarrow rx + 4y = 4r$

الف) $rx + 4y = \frac{12 + 1}{r} \rightarrow rx + 4y = 1$

ب) $\frac{|c_1 - c_r|}{\sqrt{a^2 + b^2}} \rightarrow \frac{r}{\sqrt{5r}} = \frac{r}{\sqrt{1r}} = \frac{r\sqrt{1r}}{1r}$

$rx - ry = 1$

$rx + ry = r$

$\rightarrow \frac{|rx - ry - 1|}{\sqrt{r^2}} = \frac{|rx + ry - r|}{\sqrt{r^2}}$

$\begin{cases} rx - ry - 1 = rx + ry - r \rightarrow x - 5y = -\frac{r}{r} \\ rx - ry - 1 = -rx - ry + r \rightarrow 2x + y = r \end{cases}$

$y = -rx + r$

$y = rx + 5$

$\tan \theta = \left| \frac{m - m'}{1 + mm'} \right|$

$\rightarrow \tan \theta = \left| \frac{5}{-5} \right| \rightarrow \theta = 45^\circ$

$$B \begin{vmatrix} -5 \\ 4 \end{vmatrix} \quad A \begin{vmatrix} 3 \\ -2 \end{vmatrix}$$

الف) $d = \sqrt{1^2 + 4^2} = 1.$

ب) $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \rightarrow \frac{-2}{2}, \frac{2}{2} \rightarrow (-1, 1)$

الف) $x = \frac{-10 - 2 + 3}{3} = -3$, $y = \frac{-13 + 3 + 1}{3} = -3 \rightarrow \begin{matrix} \text{مركز} \\ \text{ثقل} \end{matrix} = \begin{vmatrix} -3 \\ -3 \end{vmatrix}$

ب) $\begin{vmatrix} -10 & -2 & 3 \\ -13 & 3 & 1 \\ 1 & 1 & 1 \end{vmatrix} = -30 - 39 - 2 - 9 + 10 - 24 = -94 \rightarrow 94$
 $S = \frac{94}{2} = 47$

الف) $y' = -y \rightarrow y = -\frac{r_n + 1}{r_n - r}$

ب) $x' = -x \rightarrow y = \frac{-r_n + 1}{-r_n - r}$

2.) $\begin{matrix} x' \geq y \\ y' = x \end{matrix} \rightarrow x = \frac{ry + 1}{ry - r} \rightarrow y = -\frac{-rx - 1}{rx - r} \rightsquigarrow y = \frac{rx + 1}{rx - r}$

3.) $\begin{matrix} x' \geq -y \\ y' = -x \end{matrix} \rightarrow -x = \frac{-ry + 1}{-ry - r} \rightarrow \frac{-ry + 1}{ry + r} = x \rightsquigarrow y = -\frac{rx - 1}{rx + r} \rightsquigarrow y = \frac{-rx + 1}{rx + r}$

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$$\text{c) } \begin{aligned} x &= x - r \rightarrow x = x' + r \\ y' &= y + r \rightarrow y = y' - r \end{aligned}$$

$$\rightarrow \frac{r(x' + r) + 1}{x' + r - r} = y' - r$$

$$\frac{rx' + r}{x' - 1} + r = y' \rightarrow y' = \frac{rx' + r}{x' - 1} + r$$

$$\text{d) } \begin{aligned} x &= x - r \rightarrow x = x' + r \\ y' &= y - r \rightarrow y = y' + r \end{aligned}$$

$$\frac{rx' + r}{x' + r - r} = y' + r \rightarrow \frac{rx' + r}{x'} = y' + r$$

$$\frac{r}{x'} = y' + r - \frac{r}{x'} \rightarrow \frac{r}{x'} = y' + r - \frac{r}{x'}$$

$$\frac{r}{x'} = y' + r - \frac{r}{x'}$$

$$\begin{cases} rx + ry = r \\ x - ay = 1 \end{cases} \rightarrow \begin{cases} rx + ry = r \\ x - ay = 1 \end{cases}$$

$$\rightarrow \begin{cases} rx = r \\ x = \frac{r}{19} \\ y = \frac{-1}{19} \end{cases}$$

$$\begin{cases} rx + ry = r \\ x - ay = 1 \end{cases} \quad \begin{vmatrix} r & r \\ -a & 1 \end{vmatrix} = -19$$

$$\begin{vmatrix} r & r \\ -a & 1 \end{vmatrix} = -19$$

$$\begin{bmatrix} r & r \\ 1 & 1 \end{bmatrix} = 1$$

$$x = -\frac{1r}{-19} = \frac{1r}{19} \quad y = \frac{1}{-19} = -\frac{1}{19}$$

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